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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,537	12/19/2003	Gary A. KNEEZEL	117003	1536
27074	7590	08/01/2006	EXAMINER	
OLIFF & BERRIDGE, PLC. P.O. BOX 19928 ALEXANDRIA, VA 22320			ARANCIBIA, MAUREEN GRAMAGLIA	
			ART UNIT	PAPER NUMBER

1763

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/707,537

Applicant(s)

KNEEZEL, GARY A.

Examiner

Maureen G. Arancibia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a): In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 4-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2003 and 10 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's further arguments in traverse of the requirement for election of species have been fully considered but they are not persuasive. The traversal is on the ground(s) that: 1) the nine species have not been shown to be independent or distinct; 2) the subject matter of all species is sufficiently related that a through search for the subject matter of any one species would encompass a search for the subject matter of the remaining species, and that therefore a search and examination of the entire application could be made without serious burden; and 3) that the requirement for election of species imposes unnecessary delay and expense on Applicant. These arguments are not found persuasive because: 1) As indicated in the requirement for election of species mailed 19 December 2005, the enumerated species are drawn to the patentably distinct methods of making the first through ninth embodiments of the disclosed filter, as disclosed in the likewise enumerated Figures and corresponding sections of the Specification. As disclosed by Applicant, each of the nine methods of making the respective first through ninth embodiments of the disclosed filter has independent or distinct features, including the type of etching (orientation dependent, RIE, etc.) used to form the first, second, and third passageways; the number of substrates used to form the filter; and in which of the substrates the first, second, and third passageways are formed (forming the distinct filtration systems illustrated in the enumerated Figures); 2) The Examiner must disagree with Applicant's citation of the class(es) and subclass(es) in which the prior art of record is classified as alleged

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evidence that a search for Species A would encompass the same ground as required for the other species. The prior art of record was revealed by a search specifically for Species A. The search for the elected species is targeted not just by class and subclass, but also by keyword-based text search. A search for any of the other non-elected eight species would require a different and burdensome targeting to or within the relevant class(es) and subclass(es), as well as specifically designed keyword-based text searching. As indicated in the office action mailed 22 March 2006, while the searches for the subject matter of the various species may overlap, there is no reason to expect that those searches would be *coextensive*. The lack of coextensiveness is pointed out as further evidence that the inventions require a different field of search (see MPEP § 808.02), and that restriction for examination purposes as indicated is proper due to the burdensome nature of performing a search for each of the various species; 3) It is Applicant's responsibility to determine how best to allocate time and financial resources to the patent prosecution process. This responsibility has no bearing on the propriety of the requirement for election of species.

2. The requirement is still deemed proper. The requirement was made **FINAL** in the office action mailed 10 May 2006. Claims 4-19 have already been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 19 January 2006. Claims 1-3 are drawn to the elected Species A, and will be examined.

3. The Examiner notes in regards to Claim 1 that the elected Species A requires that the first and second passages be formed in the first substrate, and the third passages be formed in the second substrate. This limitation of Claim 1 will be examined. The recited limitation of alternately forming the third passages in the first substrate corresponds to non-elected Species E and F. The Examiner further notes in regards to Claims 2 and 3 that the elected Species A further requires that the first, second, and third passages be formed using an orientation-dependent etching technique. (Figures 2 and 3; Specification, Paragraphs 40-41) This limitation of Claims 2 and 3 will be examined. The recited limitation of forming the passages by reactive ion etching corresponds to non-elected Species B, and will not be examined at this time. Moreover, for future reference, the Examiner notes that the recited limitation in Claims 2 and 3 of a non orientation-dependent etching technique (which will not be examined at this time) does not appear to have support in the Specification.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "**130**" has been used to designate both the upper substrate and the passages in the upper substrate in Figure 2. The reference character designating the upper substrate should be corrected to "**140**". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of

an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The Examiner notes the replacement drawing sheet submitted on 10 May 2006.

However, this drawing sheet is improper for the instant application, since Figures 1 and 2 were previously presented on separate drawing sheets. Entry of this replacement drawing sheet would result in two versions of Figure 2.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,234,623 to Drake.

In regards to Claims 1 and 2, Drake teaches a method of manufacturing an internal filter, comprising: providing a first substrate 31; providing a second substrate 28; forming a plurality of first passages 55 in the first substrate using an orientation-dependent etching technique (Column 3, Lines 55-62; Column 5, Lines 11-26); forming a plurality of second passages 45 in the first substrate using an orientation-dependent etching technique (Column 3, Lines 55-62; Column 5, Lines 11-26); forming a plurality of third passages 60 in the second substrate (*in top layer 18*) using an etching

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technique (Column 4, Lines 34-46; Column 5, Lines 33-43); and placing the first and second substrates adjacent to each other (Column 4, Lines 47-56; Column 5, Lines 45-53), such that the plurality of third passages extend between the first passages and second passages and fluidly connect the first and second passages such that particles having a size greater than that which can pass through the third passages are filtered from the fluid when the fluid flows through the first passages, into and through the third passages and into the second passages (Column 4, Lines 35-67; Figures 2 and 3).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over**

Drake.

The teachings of Drake were discussed above.

In regards to Claim 3, Drake does not expressly teach that third passages 60 are formed by orientation-dependent etching.

Drake does teach that second substrate 28 is formed of silicon (Column 5, Lines 34-36), and that orientation-dependent etching is used to etch tapered passages 55 (Figure 2) in a silicon substrate 31. (Column 3, Lines 55-62; Column 5, Lines 11-26) Drake further teaches that it is preferable for both filter arrays (i.e. first passages 55 and third passages 60) to have substantially the same pore size (Column 4, Lines 57-58)

It would have been obvious to one of ordinary skill in the art to modify the method taught by Drake to form third passages 60 by orientation-dependent etching of silicon substrate 28, rather than just etching the third passages into top layer 18 of substrate 28. The motivation for making such a modification would have been that by using the same etching technique to form tapered passages, both filter arrays (first passages 55 and third passages 60) could easily be formed to have the same size (since they would be of the same tapered shape), in order to filter out particulates or contaminants from the fluid. (Column 4, Lines 47-67).

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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10. Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/707,535 ('535).

Although the conflicting claims are not identical, they are not patentably distinct from each other because while Claim 1 of '535 is a product claim, it recites all of the limitations of Claim 1 of the instant application substantially as claimed.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

11. Claims 2 and 3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/707,535 in view of Poleshuk.

In regards to Claims 2 and 3, Claim 1 of '535 does not recite that the first, second, and third passages are formed by using an orientation-dependent etching technique.

Poleshuk teaches that first, second, and third passages 29 in first and second substrates 28 are formed using an orientation-dependent etching technique (Figure 6; Column 9, Lines 50-62)

It would have been obvious to one of ordinary skill in the art to form the first, second, and third passages recited by Claim 1 of '535 using an orientation-dependent etching technique, as taught by Poleshuk. The motivation for doing so, as taught by Poleshuk (Column 9, Lines 50-62), would have been to form controllably form passages with sloped walls at a set angle.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

12. Applicant's remaining arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen G. Arancibia whose telephone number is (571) 272-1219. The examiner can normally be reached on core hours of 10-5, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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